Benchmark: Chiseled "Cl" Top of Southeast Wingwall of SN 050-0030. Elev. = 467.16

Existing Structure: SN 050-0030 built in 1970 as SBI Route 71, Section U-BR at Station 99+40. Structure consists of two simple span PPC deck beams on closed abutments and solid pier. 61'-8" back-to-back abutments. 46'-6" out-to-out deck.

Structure to be removed and replaced using stage construction.

No Salvage.

** Slab thickness may be refined in final design.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	JOB NO.	SHEET
FAP 627	*	LaSalle		

Sheet 1 of 1 Sheets

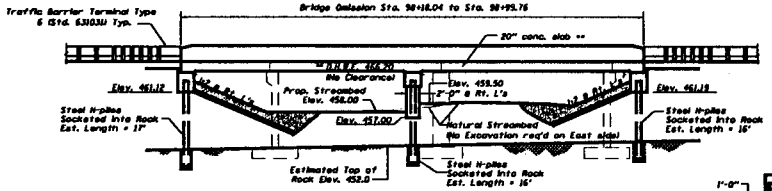
* U-BR

WATERWAY INFORMATION

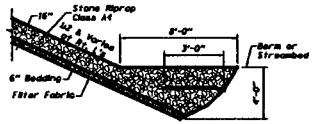
Drainage Area= 7.0 Sq. Mi. Exist. Low Grade Elev.= 466.6 @ Sta. 97+24
Prop. Low Grade Elev.= 466.3 @ Sta 96+79

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
	10	1370	257	329	465.5	0.5	0.4	466.1	465.9
Design	50	2110	257	329	466.2	0.9	0.7	467.1	466.9
Base	100	2420	257	329	466.5	0.6	0.5	467.1	467.0
Overtop (exist.)	20	1690	257	329	465.8	0.8	-	466.6	-
Overtop (prop.)	30	1830	257	329	465.9	-	0.7	-	466.6

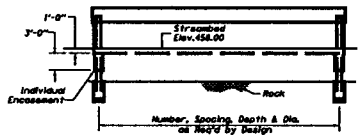
10 Year Velocity Through Existing Bridge= 5.3 fps
10 Year Velocity Through Prop. Bridge= 4.2 fps



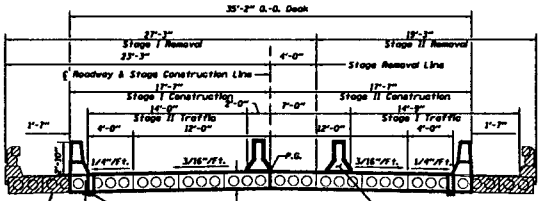
ELEVATION
(Looking North)



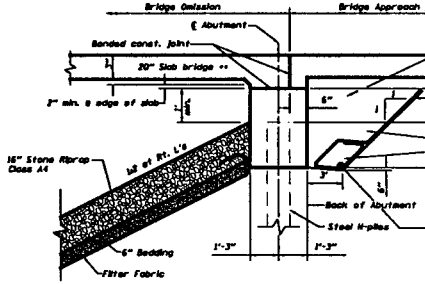
TOE STONE RIPRAP TREATMENT



PIER SKETCH



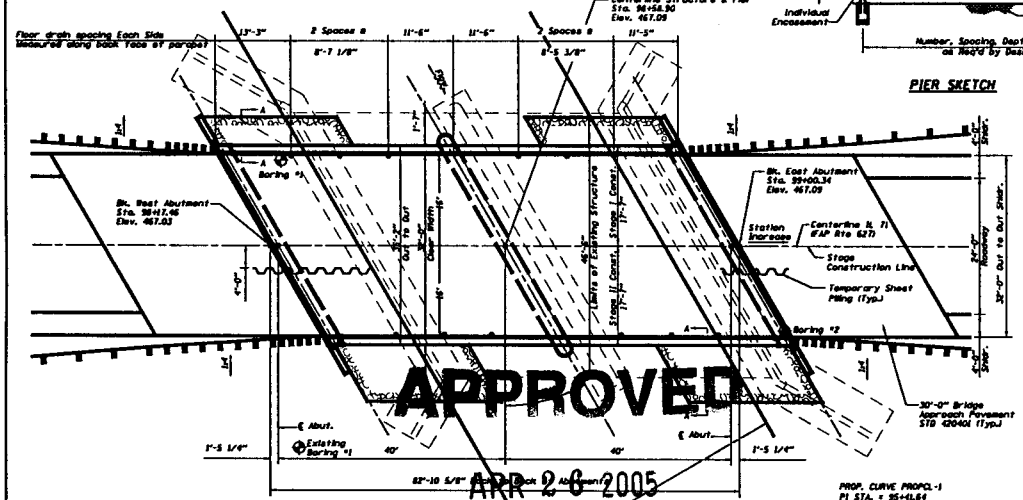
DECK CROSS SECTION
(Looking East)

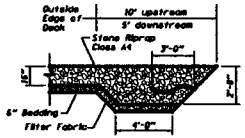


SECTION THRU ABUTMENT
Horiz. Dimensions at right angles

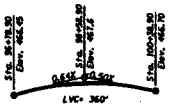
A 6"Ø perforated drain pipe shall be situated at the bottom of an approximate 2'x2' area of porous granular embankment. The 2'x2' area shall be wrapped completely in geotechnical fabric for trench drains. Extend pipe parallel with the cap until intersecting with the sideslope. Pipes shall drain onto concrete headwalls (Article 601.05 of the Std. Specifications.)

* Included in the cost of "porous granular embankment"





SECTION A-A



PROFILE GRADE
(Along Centerline Roadway)

LOADING AASHTO-94
Allow 50#/sq. ft. for future wearing surface

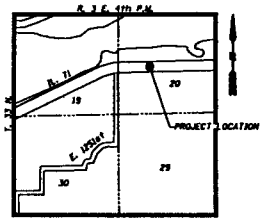
DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
Field Units
f'c = 3,500 psi (Substructure)
f'c = 3,500 psi (Superstructure)
fy = 60,000 psi (reinforcement)

SEISMIC DATA
Seismic Performance Category (S.P.C.) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0

HIGHWAY CLASSIFICATION

FAP Route	627
Class	Minor Arterial (Rural)
A.D.T.=	1200 (2001) 1700 (2021)
A.D.T.T.=	5.2%
D.H.V.=	174 (2021)
Design Speed	55 mph
Posted Speed	55 mph



LOCATION SKETCH

PROP. CURVE PROPCL-1
PI STA. = 95+41.64
Δ = 6° 22' 44.8"
T = 160.00'
R = 2,870.65'
L = 319.67'
D = 2° 01' 12"
E = 4.44'
S.E. = 0.041 '/'
P.C. STA. = 93+81.64
P.T. STA. = 97+01.31
ATTAIN S.E. STA. 92+73.31 TO STA. 94+35.81 (66/33)
REMOVE S.E. STA. 96+36.31 TO STA. 97+88.81 (60/40)

PROP. CURVE PROPCL-2
PI STA. = 101+13.05
Δ = 4° 20' 19.67"
T = 100.00'
R = 2,639.83'
L = 199.90'
D = 2° 10' 15"
E = 1.89'
S.E. = 0.044 '/'
P.C. STA. = 100+13.05
P.T. STA. = 102+12.96
ATTAIN S.E. STA. 99+15.05 TO STA. 100+78.05 (60/40)
REMOVE S.E. STA. 101+58.79 TO STA. 103+21.29 (66/33)

DESIGNED	JBA
CHECKED	JLS
DRAWN	ARP
CHECKED	JBA

APPROVED
APR 26 2005
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN
FAP ROUTE 627 (IL 71)
OVER UNNAMED STREAM
SECTION U-BR
STA. 98+58.9
LASALLE COUNTY
SN 050-0243